

#  $\times$  Price = Cost

$f$	$f$	8	$8f$
$p$	$30-f$	4	$4(30-f)$

$$f=12$$

$$8f + 4(30-f) = 168$$

$$8f + 120 - 4f = 168$$

$$120 + 4f = 168$$

$$4f = 48$$

	#	x Price	= Cost
Adult	$920 - s$	4	$4(920 - s)$
Student	$s$	2	$2s$

$$4(920 - s) + 2s = 2446$$

$$3680 - 4s + 2s = 2446$$

$$3680 - 2s = 2446$$

$$-2s = -1234$$

$$s = 617$$

	#	Value	total
dimes	$40-n$	10¢	$400¢ - 10n$
nickels	$n$	5¢	$5n¢$

$$10(40-n) + 5n = 290$$

$$400 - 10n + 5n = 290$$

$$\begin{array}{r} 400 \\ -290 \end{array}$$

$$\begin{array}{r} -5n = -110 \\ \hline -5 \quad -5 \end{array}$$

$$n = 22$$

	#	Value	total
dimes	$52-n$	10	$10(52-n)$
nickels	$n$	5	$5n$

  

$$10(52-n) + 5n = 450$$

$$520 - 10n + 5n = 450 \quad (n=14)$$

$$520 - 5n = 450$$

$$-520 \quad -5n = -70$$

$$\frac{-5n}{-5} = \frac{-70}{-5}$$

$$n = 14$$

	Number	Price	Cost
Bought	$x$	1.50	$1.50x$
Sold	$x-20$	3	$3(x-20)$

$$3x - 60 - 1.5x = 15$$

$$1.5x - 60 = 15$$

$$1.5x = 75$$

$$x = 50 \text{ bought}$$

	Number $\times$ Price = Cost		
bought	12	$q$	$12q$
Sold	10	$q+20$	$10q+200$

$$\begin{array}{rcl}
 10q + 200 & -12q & = 100 \\
 -2q + 200 & & = 100 \\
 \underline{-200} & & \underline{-200} \\
 -2q & = & -100
 \end{array}$$

$\textcircled{70}$       $50 = q$

quarter	#	worth
	$x$	$25x$
nickel	$2x$	$5(2x)$

$$25x + 10x = 490$$

$$\frac{35x}{35} = \frac{490}{35}$$

$$x = 14 \text{ quarters}$$

	Quantity	Price	Cost
Bought	60	$x$	$60x$
Sold	57	$2x$	$57 \cdot 2x$

$$114x - 60x = 1,188$$

$$54x = 1,188$$

$$x = 22$$

$$2x = 44$$